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PATENT APPLICATION

ATTORNEY DOCKET NO. 200313142-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Randy Haagens et al.

Confirmation No.: 5771

Application No.: 10/737,207

Examiner: Anwari, Maceeh

Filing Date: December 16, 2003

Group Art Unit: 2144

Title: METHOD AND APPARATUS FOR HANDLING FLOW CONTROL FOR A DATA TRANSFER

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TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on February 27, 2008.

☒ The fee for filing this Appeal Brief is $510.00 (37 CFR 41.20).

☐ No Additional Fee Required.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

☐ 1st Month $120	☐ 2nd Month $460	☐ 3rd Month $1050	☐ 4th Month $1640

☐ The extension fee has already been filed in this application.

☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of $ 510. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

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Respectfully submitted,

Randy Haagens et al.

By

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Randy Haagens et al.	§	Group Art Unit:	2144
Serial No.: 10/737,207	§	Confirmation No.:	5771
Filed: December 16, 2003	§	Examiner:	Anwari, Maceeh
For: METHOD AND APPARATUS FOR HANDLING FLOW CONTROL FOR A DATA TRANSFER	§	Atty Docket:	200313142-1 NUHP:0166/FLE/DOO

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April 29, 2008
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Katey P. Hines

APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 41.31 AND 41.37

This Appeal Brief is being filed in furtherance to the Notice of Appeal mailed on February 27, 2008, and received by the Patent Office on March 3, 2008.

The Commissioner is authorized to charge the requisite fee of $510.00, and any additional fees which may be required, to the credit card charge authorization submitted electronically with the present filing. However, if for any reason this charge fails, the Commissioner is authorized to charge Deposit Account No. 08-2025; Order No. NUHP:0166/FLE/DOO (200313142-1).

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1. **REAL PARTY IN INTEREST**

The real party in interest is Hewlett-Packard Development Company, L.P., the Assignee of the above-referenced application by virtue of the Assignment recorded at reel 015260, frame 0741, and dated April 26, 2004. Accordingly, Hewlett-Packard Development Company, L.P. will be directly affected by the Board's decision in the pending appeal.

2. **RELATED APPEALS AND INTERFERENCES**

Appellants are unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellants' legal representative in this Appeal.

3. **STATUS OF CLAIMS**

Claims 1-26 are currently pending, are currently under final rejection and, thus, are the subject of this Appeal.

4. **STATUS OF AMENDMENTS**

There are no outstanding amendments to be considered by the Board.

5. **SUMMARY OF CLAIMED SUBJECT MATTER**

The Application contains four independent claims, namely, claims 1, 11, 21, and 26, all of which are the subject of this Appeal. The subject matter of these claims is summarized below.

Claims 1, 11, 21, and 26 relate to devices and techniques involved in managing of a data transfer between networked computer systems. *See* Application, page 11, line 19 – page 12, line 1. The networked computer systems may include processor nodes that may exchange information and share memories across the computer systems. *See id.*, page 8, lines 1-2. Moreover, this exchange of information and memory sharing may be accomplished through the use of *protocol stacks*. *See id.*, page 8, lines 4-6. The protocol stack may include a plurality of protocols utilized by a process or application to perform certain functions during the data transfer. *See id.*, page 8, lines 9-11; page 12, lines 1-7; page 14, lines 3-6. By utilizing protocol stacks, the communication between computer systems may be maintained and may also be more efficient. *See id*, page 18, lines 6-7.

With regard to the aspect of the invention set forth in independent claim 1, discussions of the recited features of claim 1 can be found at least in the below cited locations of the specification and drawings. Claim 1 generally relates to an apparatus for managing flow control of a data transfer. By way of example, present embodiments include a processor (e.g., 102, 104, 302; Application, page 6, lines 13-14) adapted to operate (e.g., Application, page 8, lines 4-6) according to a first protocol (e.g., 306) associated with a plurality of receive buffers. *See* Application, page 13, lines 14-15, and page 13, line 17 – page 14, line 1. Further, present embodiments include the processor (e.g., 102, 104, 302; Application, page 6, lines 13-14) being further adapted to operate according to a second protocol (e.g., 310) adapted to manage the plurality of receive buffers for the first protocol (e.g., Application, page 14, lines 4-6), the processor (e.g.,

102, 104, 302; Application, page 6, lines 13-14) being further adapted to operate according to a third protocol (e.g., 314) that determines whether one of the plurality of receive buffers is available for a data packet (e.g., 314, 330; Application, page 17, lines 10-12) and, if one of the plurality of receive buffers is available, permits an acknowledgement packet to be sent to a node that sent the data packet (e.g., Application, page 17, lines 15-17), and, if one of the plurality of receive buffers is unavailable, drops the data packet, notifies the second protocol regarding the unavailability of the plurality of receive buffers, and withholds the acknowledgement packet. *See* Application, page 17, line 17 - page 18, line 2.

With regard to the aspect of the invention set forth in independent claim 11, discussions of the recited features of claim 11 can be found at least in the below cited locations of the specification and drawings. By way of example, present embodiments include a plurality of systems (e.g., 102, 110, 302, 304), at least one of the plurality of systems executing a process (e.g., 306), and at least one input/output device (e.g., 126) adapted to receive a data packet from the at least one of the plurality of systems (e.g., Application, page 8, lines 1-6), the at least one input/output device comprising: a first protocol (e.g., 306) associated with a plurality of receive buffers. *See* Application, page 13, lines 14-15, and page 13, line 17 – page 14, line 1. Further, present embodiments include a second protocol (e.g., 310) adapted to manage the plurality of receive buffers for the first protocol (e.g., Application, page 14, lines 4-6) and a third protocol (e.g., 314) that determines whether one of the plurality of receive buffers is available for a data

packet (e.g., 314, 330; Application, page 17, lines 10-12) and, if one of the plurality of receive buffers is available, permits an acknowledgement packet to be sent to a node that sent the data packet (e.g., Application, page 17, lines 15-17), and, if one of the plurality of receive buffers is unavailable, drops the data packet, notifies the second protocol regarding the unavailability of the plurality of receive buffers, and withholds the acknowledgement packet. *See* Application, page 17, line 17 - page 18, line 2.

With regard to the aspect of the invention set forth in independent claim 21, discussions of the recited features of claim 21 can be found at least in the below cited locations of the specification and drawings. By way of example, present embodiments include the acts of receiving a data packet (e.g., 404), determining whether at least one receive buffer is available for the data packet (e.g., 404), if the at least one buffer is available, sending an acknowledgement packet to a node that sent the data packet (e.g., Application, page 19, lines 10-12), and if the at least one buffer is unavailable (e.g., Application, page 19, lines 17-18), dropping the data packet (e.g., 416), providing a notification regarding the unavailability of the at least one buffer (e.g., Application, page 19, lines 18-19), and withholding an acknowledgement packet from the node that sent the data packet (e.g., 418; Application, page 20, lines 3-4).

With regard to the aspect of the invention set forth in independent claim 26, discussions of the recited features of claim 26 can be found at least in the below cited locations of the specification and drawings. By way of example, present embodiments

include means for receiving a data packet at a first protocol (e.g., 304; Application, page 18, lines 16-17), means for determining whether at least one receive buffer is available for the data packet (e.g., 334; Application, page 19, lines 1-4), means for sending an acknowledgement packet to a node that send the data packet if the at least one buffer is available (e.g., 334; Application, page 19, lines 7-12), and means for dropping the data packet (e.g., 332; Application, page 20, lines 1-3), notifying a second protocol regarding the unavailability of the at least one buffer (e.g., Application, page 19, line 17 – page 20, line 1), and preventing an acknowledgement packet from being sent if the at least one buffer is unavailable (e.g., 418; Application, page 20, lines 3-4).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

First Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's first ground of rejection in which the Examiner rejected claims 1-26 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as the invention.

Second Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's second ground of rejection in which the Examiner rejected claims 1, 2, 4, 7-12, 14, 17-23,

25, and 26 under 35 U.S.C. § 102(b) as being taught by Recio et al, International Patent number WO 00/72142 (hereinafter referred to as "the Recio reference").

7. ARGUMENT

As discussed in detail below, the Examiner has improperly rejected the pending claims. Further, the Examiner has misapplied long-standing and binding legal precedents and principles in rejecting the claims under Sections 112 and 102. Accordingly, Appellants respectfully request full and favorable consideration by the Board, as Appellants strongly believe that claims 1-26 are currently in condition for allowance.

A. Ground of Rejection No. 1:

With respect to the Examiner's rejection of claims 1-26 under 35 U.S.C. § 112, second paragraph, the Examiner stated the following:

> Throughout the text of the claims the applicant utilizes the term *protocol*, in some areas the conventional meaning of a protocol seems to apply (*i.e. transmitted by an upper layer protocol)*; however the applicant fails to explicate what is meant by it in other areas *(i.e. DDP protocol iWARP protocol)*. The examiner will interpret the term protocol to mean a way to transmit data between any two devices.
>
> Office Action, page 2.

Appellants respectfully traverse the rejection. The Examiner's focus during examination of claims for compliance with the requirement for definiteness under 35 U.S.C. § 112, second paragraph, should be whether the claim meets the threshold

requirements of clarity and precision, not whether more suitable language or modes of expression are available. *See* M.P.E.P. § 2173.02. Appellants may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought. *See* M.P.E.P. §§ 2173.01 and 2173.05; *In re Swinehart*, 160 U.S.P.Q. 226 (C.C.P.A. 1971). The Examiner is also reminded not to equate breadth of a claim with indefiniteness. *In re Miller*, 169 U.S.P.Q 597 (C.C.P.A. 1971).

The essential inquiry pertaining to the definiteness requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. *See* M.P.E.P. § 2173.02. As set forth in Section 2173 of the Manual of Patent Examining Procedure, definiteness of claim language must be analyzed, not in a vacuum, but in light of:

(A) The content of the particular application disclosure;

(B) The teachings of the prior art; and

(C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

In reviewing a claim for compliance with 35 U.S.C. § 112, second paragraph, the Examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. § 112, second paragraph, by providing clear warning to others as to

what constitutes infringement of the patent. *See Solomon v. Kimberly-Clark Corp.*, 55 U.S.P.Q.2d 1279, 1283 (Fed. Cir. 2000). Only when a claim remains insolubly ambiguous without a discernible meaning after all reasonable attempts at construction must it be declared indefinite. *See Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 71 U.S.P.Q.2d 1081, 1089 (Fed. Cir. 2004). Accordingly, a claim term that is not used or defined in the specification is not indefinite if the meaning of the claim term is discernible. *See Bancorp Services, L.L.C. v. Hartford Life Ins. Co.*, 69 U.S.P.Q.2d 1996, 1999-2000 (Fed. Cir. 2004).

Appellants submit that the term "protocol," as recited in claims 1-7, 9-17, 19, 20, 23, 24, and 26, is not indefinite because the meaning of the claim term is discernable and is clearly supported by the specification (e.g., Application, page 2, lines 12-15, page 8 lines 8-11). The specification clearly allows for a process protocol 202 to comprise, for example, a process, an upper layer protocol, or an application that may interact with the protocol stack to communicate with other devices or within the node, as well as with an application protocol. *See* Application, page 8, lines 12-14 and 18-19. Similarly, an application protocol (e.g., 204) is clearly described by the specification as being an Internet small computer systems interface that interacts with a protocol or a group of protocols, collectively referred to as a datamover protocol layer (e.g. 206). *See* Application, page 8, line 18 – page 9, line 2. Further protocols, such as an iWARP protocol are also clearly described by the specification. *See* Application, page 9, lines 4-11.

Indeed, although the term protocol is used throughout the specification, each protocol is clearly defined, which distinguishes between the types of protocols disclosed. These separate protocols are also claimed.

For example, claim 1 recites a first, a second, and a third protocol, each associated with recited claim elements and/or actions. Each of these first, second, and third protocols are supported in the specification. For example, the first protocol may be an upper layer protocol such as an Internet small computer systems interface protocol, while the second protocol may be a datamover protocol, and the third protocol may be an iWARP protocol. Moreover, the protocols recited in claim one are clearly modified by numeric adjectives (*first* protocol, *second* protocol, and *third* protocol) at least to avoid confusion to one skilled in the art, and the protocols, as shown above, are clearly supported in the specification both by category and by the type of actions that the protocols undertake, as well as the interaction between corresponding protocols. Because the term "protocol" is clearly defined in the specification, and the claimed "protocols" are distinguishable in the claims, the Section 112 rejection of claims 1-26 is improper.

Thus, the Examiner in incorrect in asserting some areas of the claims include the term "protocol" with an apparently conventional meaning, while other areas reference non-explicated meanings. Both the specification, and the claims, clearly delineate between the different types of protocols claimed. Accordingly, for at least the reasons set

forth above, Appellants respectfully request the Board reverse the Examiner's rejection under 35 U.S.C. § 112, second paragraph, of independent claims 1, 11, 21, and 26, as well as all claims depending therefrom.

B. Ground of Rejection No. 2:

The Examiner rejected claims 1, 2, 4, 7-12, 14, 17-23, 25, and 26 under 35 U.S.C. § 102(b) as being taught by the Recio reference. Specifically, with regard to independent claims 1, 11, 21, and 26, the Examiner stated in relevant part:

> Claim 1:
> An apparatus for managing flow control of a data transfer, comprising: a first protocol associated with a plurality of receive buffers (Figures 1-5 and Page 8 lines 4-11; multiple storage and memory components); a second protocol adapted to manage the plurality of receive buffers for the first protocol (Figure 1-5 and Page *5* lines 5-12; processors); and a third protocol that determines whether one of the plurality of receive buffers is available for a data packet and (a) if one of the plurality of receive buffers is available, permits an acknowledgement packet to be sent to a node that sent the data packet, and (b) if one of the plurality of receive buffers is unavailable, drops the data packet, notifies the second protocol regarding the unavailability of the plurality of receive buffers, and withholds the acknowledgement packet (Figures 1-5 Page 12 line 25- Page 13 line 5 & Page 14 lines 3-7 & Page 23 lines 29-31; reliability. acknowledgment, successive retries and time-outs).
>
> Claim 11:
> A network, comprising: a plurality of systems, at least one of the plurality of systems executing a process; and at least one input/output device adapted to receive a data packet from the at least one of the plurality of systems (Figures 1-5 and Page 4 lines 21-28: multiple systems/processors, WANs and LANs), the at least one input/output device comprising: a first protocol associated with a plurality of receive buffers (Figures 1-5 and Page 8 lines 4-11; multiple storage and memory components); a second protocol

adapted to manage the plurality of receive buffers for the first protocol (Figure 1-5 and Page 5 lines 5- 12; processors); and a third protocol that determines whether one of the plurality of receive buffers is available for a data packet and (a) if one of the plurality of receive buffers is available, permits an acknowledgement packet to be sent to a node that sent the data packet, and (b) if one of the plurality of receive buffers is unavailable, drops the data packet, notifies the second protocol regarding the unavailability of the plurality of receive buffers, and withholds the acknowledgement packet (Figures 1-5 Page 12 line 25- Page 13 line 5 & Page 14 lines 3-7 & Page 23 lines 29-31; reliability, acknowledgment. successive retries and time-outs).

Claim 21:
A method of managing flow control of a data transfer, the method comprising the acts of: receiving a data packet; determining whether at least one receive buffer is available for the data packet (Figures 2-5 & 9B & 11 and Page 38 lines 17-26: end-node's availability); if the at least one buffer is available, sending an acknowledgement packet to a node that sent the data packet (Figures 1-5 Page 13 line 25- Page 13 line 5 & Page 14 lines 3-7 & Page 23 lines 29-31; reliability, acknowledgment. successive retries and timeouts); and if the at least one buffer is unavailable, dropping the data packet, providing a notification regarding the unavailability of the at least one buffer, and withholding an acknowledgement packet from the node that sent the data packet (Figures 1-5 Page 12 line 25- Page 13 line 5 & Page 14 lines 3-7 & Page 23 lines 29-31: reliability, acknowledgment, successive retries and time-outs).

Claim 26:
An apparatus for managing flow control of a data transfer, comprising: means for receiving a data packet at a first protocol (Page 9 lines 29-31 & Page 10 lines 1-2 & 26-31 & Page 11 lines 1-2; reads off of the limitation of a single or multiple receive buffers); means for determining whether at least one receive buffer is available for the data packet (Figures 1-5 and Page 8 lines 4-11 ; multiple storage and memory components); means for sending an acknowledgement packet to a node that send the data packet if the at least one buffer is available (Figures 1-5 Page 12 line 25- Page 13 line 5 & Page 14 lines 3-7 & Page 23 lines 29-31; reliability, acknowledgment, successive retries and time-outs); and means for dropping the data packet, notifying a second protocol regarding the unavailability of the at least one buffer, and preventing an

> acknowledgement packet from being sent if the at least one buffer is unavailable (Figures 1-5 Page 12 line 75- Page 13 line 5 & Page 13 lines 3-7 & Page 23 lines 29-31: reliability, acknowledgment, successive retries and time-outs).

Appellants respectfully traverse this rejection. Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under Section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under Section 102, a single reference must teach each and every limitation of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). The prior art reference also must show the *identical* invention "*in as complete detail as contained in the ... claim*" to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989) (emphasis added). Accordingly, Appellants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter.

Claim Features of Independent Claims 1, 11, 21, and 26 Omitted from the Recio Reference

The Examiner rejected claims 1, 2, 4, 7-12, 14, 17-23, 25, and 26 under 35 U.S.C. § 102(b) as being taught by the Recio reference. With respect to the Examiner's rejection of claims 1, 2, 4, 7-12, 14, 17-23, 25, and 26 under 35 U.S.C. § 102(b), the Examiner's

rejections with respect to independent claims 1, 11, 21, and 26 are exemplary. Independent claims 1, 11, 21, and 26 will be argued as a group, whereby the similar claim language found in each of claims 1, 11, 21, and 26 may represent allowable subject matter for each of claims 1, 11, 21, and 26.

The Recio reference fails to anticipate all elements of independent claims 1, 11, 21, and 26. Independent claim 1 recites, *inter alia*, "the processor being further adapted to operate according to a second protocol adapted to *manage the plurality of receive buffers* for the first protocol, the processor being further adapted to operate according to a third protocol that *determines whether one of the plurality of receive buffers is available* for a data packet and (a) if one of the plurality of receive buffers is available, *permits* an acknowledgement packet to be sent to a node that sent the data packet, and (b) if one of the plurality of receive buffers is unavailable, drops the data packet, *notifies* the second protocol regarding the unavailability of the plurality of receive buffers, and withholds the acknowledgement packet." (Emphasis added). Similarly, Independent claim 11 recites, *inter alia*, "a second protocol adapted to *manage the plurality of receive buffers* for the first protocol; and a third protocol that *determines whether one of the plurality of receive buffers is available* for a data packet and (a) if one of the plurality of receive buffers is available, *permits* an acknowledgement packet to be sent to a node that sent the data packet, and (b) if one of the plurality of receive buffers is unavailable, drops the data packet, *notifies* the second protocol regarding the unavailability of the plurality of receive buffers, and withholds the acknowledgement packet." (Emphasis added).

Likewise, independent claim 21 recites, *inter alia*, "receiving a data packet; *determining whether at least one receive buffer is available* for the data packet; if the at least one buffer is available, *sending an acknowledgement packet* to a node that sent the data packet; and if the at least one buffer is unavailable, dropping the data packet, *providing a notification* regarding the unavailability of the at least one buffer, and withholding an acknowledgement packet from the node that sent the data packet." (Emphasis added). Similarly, independent claim 26 recites, *inter alia*, "means for *determining whether at least one receive buffer is available* for the data packet; means for *sending an acknowledgement* packet to a node that send the data packet if the at least one buffer is available; and means for dropping the data packet, *notifying* a second protocol regarding the unavailability of the at least one buffer, and preventing an acknowledgement packet from being sent if the at least one buffer is unavailable." (Emphasis added).

First, the cited sections of the Recio reference, as well as the remainder of the reference, fail to describe a processor being further adapted to operate according to a third protocol that *determines whether one of the plurality of receive buffers is available* for a data packet. The Recio reference does describe a data transfer system using queue pairs and corresponding work queue elements for the transfer of data. *See* Recio, page 8, line 29 – page 9, line 9. Moreover, the Recio reference describes a work queue as containing a work queue element that describes *where* to place incoming data. *See* Recio,

page 9, lines 10-11. However, a component that merely describes *where* data is intended to be placed is not analogous to determining *whether* one of the plurality of receive buffers *is available* for placing a data packet. As such, the Recio reference fails to describe a processor being further adapted to operate according to a third protocol that *determines whether one of the plurality of receive buffers is available* for a data packet, as recited in independent claims 1, 11, 21, and 26.

Second, the cited sections of the Recio reference, as well as the remainder of the reference, fail to describe *permitting* an acknowledgement packet to be sent if one of the plurality of receive buffers is *available*. The Recio reference clearly discloses transmitting acknowledgement packets for *all* frame (data) transfers. *See* Recio, page 12, lines 25-31. Indeed, the Recio reference specifically states that "the acknowledgment does not validate that the receiving process has consumed the data," but rather that "the data has reached its destination." *Id.* at page 13, lines 2-5, page 13, lines 1-5, and page 22, lines 15-19. Thus the Recio reference describes transmitting acknowledgement when packets are received *regardless of the availability* of locations for the receiving process to store the packets. As such, the Recio reference fails to describe *permitting* an acknowledgement packet to be sent, or sending an acknowledgement packet, if one of the plurality of receive buffers is *available*, as recited in independent claims 1, 11, 21, and 26.

Third, the cited sections of the Recio reference, as well as the remainder of the reference, fail to describe *notifying* the second protocol regarding the unavailability of the plurality of receive buffers if one of the plurality of receive buffers is unavailable. The Recio reference discloses, at best, retransmitting frames to a destination when an acknowledgement is *not received by the source*. *See* Recio, page 23, lines 29-31. Even if, *arguendo*, the lack of transmission of an acknowledgment were due to a receive buffer being unavailable, there is no discussion in the Recio reference of *notifying* a second protocol of the unavailability of a receive buffer. Indeed, the lack of an acknowledgement indicates *only* that a packet was not received, it does not indicate to any protocol *why* the packet was not received, i.e. because of the unavailability of a receive buffer. Lack of transmission of an acknowledgment is not analogous to both actively *notifying* the second protocol regarding the unavailability of the plurality of receive buffers, as well as withholding the acknowledgement packet. As such, the Recio reference fails to describe if one of the plurality of receive buffers is unavailable, dropping the data packet, *notifying* the second protocol regarding the unavailability of the plurality of receive buffers, and withholding the acknowledgement packet, as recited in independent claims 1, 11, 21, and 26.

For at least these reasons, Appellants respectfully submit that independent claims 1, 11, 21, and 26, as well as all claims depending therefrom, are not anticipated by the Recio reference. Accordingly, Appellants respectfully request the withdrawal of the rejection of independent claims 1, 11, 21, and 26 under Section 102 based on the Recio

reference, and further request allowance independent claims 1, 11, 21, and 26, as well as all claims depending therefrom.

Conclusion

Appellants respectfully submit that all pending claims are in condition for allowance. However, if the Examiner or Board wishes to resolve any other issues by way of a telephone conference, the Examiner or Board is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Date: April 29, 2008

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8. APPENDIX OF CLAIMS ON APPEAL

Listing of Claims:

1. An apparatus for managing flow control of a data transfer, comprising: processor adapted to operate according to a first protocol associated with a plurality of receive buffers, the processor being further adapted to operate according to a second protocol adapted to manage the plurality of receive buffers for the first protocol, the processor being further adapted to operate according to a third protocol that determines whether one of the plurality of receive buffers is available for a data packet and (a) if one of the plurality of receive buffers is available, permits an acknowledgement packet to be sent to a node that sent the data packet, and (b) if one of the plurality of receive buffers is unavailable, drops the data packet, notifies the second protocol regarding the unavailability of the plurality of receive buffers, and withholds the acknowledgement packet.

2. The apparatus set forth in claim 1, wherein the first protocol is an upper layer protocol ("ULP").

3. The apparatus set forth in claim 2, wherein the upper layer protocol is an internet small computer systems interface ("iSCSI") protocol.

4. The apparatus set forth in claim 1, wherein the second protocol is a datamover protocol.

5. The apparatus set forth in claim 1, wherein the third protocol is an iWARP protocol.

6. The apparatus set forth in claim 5, wherein the iWARP protocol is a direct data placement ("DDP") protocol.

7. The apparatus set forth in claim 1, comprising a transport protocol that generates a request to the third protocol to determine whether one of the plurality of receive buffers is available for the data packet.

8. The apparatus set forth in claim 1, wherein the data packet comprises a sequence field that corresponds to a reliability tracking value for the data packet.

9. The apparatus set forth in claim 1, wherein the acknowledgement packet comprises an acknowledgement field that corresponds to an identity of data received by the transport protocol.

10. The apparatus set forth in claim 1, comprising a transport protocol that uses a remote direct memory access network interface card ("RNIC") to receive the data packet and send the acknowledgement packet.

11. A network, comprising: a plurality of systems, at least one of the plurality of systems executing a process; and at least one input/output device adapted to receive a data packet from the at least one of the plurality of systems, the at least one input/output device comprising: a first protocol associated with a plurality of receive buffers; a second protocol adapted to manage the plurality of receive buffers for the first protocol; and a third protocol that determines whether one of the plurality of receive buffers is available for a data packet and (a) if one of the plurality of receive buffers is available, permits an acknowledgement packet to be sent to a node that sent the data packet, and (b) if one of the plurality of receive buffers is unavailable, drops the data packet, notifies the second protocol regarding the unavailability of the plurality of receive buffers, and withholds the acknowledgement packet.

12. The network set forth in claim 11, wherein the first protocol is an upper layer protocol ("ULP").

13. The network set forth in claim 12, wherein the upper layer protocol is an internet small computer systems interface ("iSCSI") protocol.

14. The network set forth in claim 11, wherein the second protocol is a datamover protocol.

15. The network set forth in claim 11, wherein the third protocol is an iWARP protocol.

16. The network set forth in claim 15, wherein the iWARP protocol is a direct data placement ("DDP") protocol.

17. The network set forth in claim 11, comprising a transport protocol that generates a request to the third protocol to determine whether one of the plurality of receive buffers is available for the data packet.

18. The network set forth in claim 11, wherein the data packet comprises a sequence field that corresponds to a reliability tracking value for the data packet.

19. The network set forth in claim 11, wherein the acknowledgement packet comprises an acknowledgement field that corresponds to an identity of data received by the transport protocol.

20. The network set forth in claim 11, comprising a transport protocol that uses a remote direct memory access network interface card ("RNIC") to receive the data packet and send the acknowledgement packet.

21. A method of managing flow control of a data transfer, the method comprising the acts of: receiving a data packet; determining whether at least one receive buffer is available for the data packet; if the at least one buffer is available, sending an acknowledgement packet to a node that sent the data packet; and if the at least one buffer is unavailable, dropping the data packet, providing a notification regarding the unavailability of the at least one buffer, and withholding an acknowledgement packet from the node that sent the data packet.

22. The method set forth in claim 21, comprising the act of placing the data packet into the at least one buffer if the at least one buffer is available.

23. The method set forth in claim 21, comprising the act of transmitting the data packet according to a transmission control protocol ("TCP").

24. The method set forth in claim 21, comprising the act of providing the notification regarding the unavailability of the at least one buffer via an internet small computer systems interface ("iSCSI") protocol.

25. The method set forth in claim 21, comprising the act of notifying a process associated with the at least one buffer once the at least one buffer is determined to be unavailable.

26. An apparatus for managing flow control of a data transfer, comprising: means for receiving a data packet at a first protocol; means for determining whether at least one receive buffer is available for the data packet; means for sending an acknowledgement packet to a node that send the data packet if the at least one buffer is available; and means for dropping the data packet, notifying a second protocol regarding the unavailability of the at least one buffer, and preventing an acknowledgement packet from being sent if the at least one buffer is unavailable.

9. **EVIDENCE APPENDIX**

None.

10. **RELATED PROCEEDINGS APPENDIX**

None.